REMARKS/ ARGUMENTS

The foregoing amendment and the following arguments are provided to impart precision to the claims, by more particularly pointing out the invention, rather than to avoid prior art.

Claims 1 – 32 are pending in the referenced application. Claims 1, 19, 29, and 31 have been amended.

35 U.S.C. § 101 Rejections

Examiner rejected claims 1 – 9, 19 – 23, 29 and 31 under 35 USC § 101 because they are drawn to non-statutory subject matter.

> "For such subject matter to be statutory, the claimed process must be limited to a practical application of the abstract idea or mathematical algorithm in the technological arts...A claim is limited to a practical application when the method, as claimed, produces a concrete, tangible and useful result..." (Manual of Patent Examining Procedures (MPEP) ¶ 2106.)

Applicant respectfully submits the independent claims 1, 19, 29 and 31 comprise statutory subject matter. A method to compress or synthesize a matrix is presented for improved image processing. Data compression and synthesis methods are recognized as acceptable subject matter for patentability. Therefore, independent claims 1, 19, 29 and 31, and the remaining claims depending from one of the foregoing independent claims are drawn to statutory subject matter. Applicant respectfully requests the withdrawal of the rejection.

35 U.S.C. § 102 (e) Rejections

Examiner rejected claims 1 - 32 under 35 U.S.C. § 102(e) as being anticipated by Lengyel, U.S. Patent No. 6,573,890 (hereinafter "Lengyel").

> "To anticipate a claim, the reference must teach every element of the claim. A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." (Manual of Patent Examining Procedures (MPEP) ¶ 2131.)

Claims 1-28

Independent claims 1, 10, 19, and 24 include claim limitations that are not disclosed or suggested by Lengyel. In particular, these independent claims include the claim limitation, or limitation similar thereto, of partitioning the matrix into a set of overlapping sub-blocks $\{m_k, k = 1, \cdots, V\}$.

Lengyel does not disclose these limitations. Rather, the reference discloses a method for coding a geometry stream by solving for low-parameter models of the stream and encoding the residual. (Lengyel, col. 3, lines 21-23). Specifically, the base may be calculated by using a row of the matrix V as the base mesh, by taking an average of several rows of V as the base mesh, or by pre-computing the base mesh. (Lengyel, col. 10, lines 24-29).

Moreover, Lengyel discloses sets of geometric transformation parameters used to transform the position of the base mesh to a new position at a selected time sample increments. (Lengyel, col. 10, lines 33-35). The transform match module calculates

transformation parameters for a geometric transform used to transform the base mesh to approximate the position of a mesh stored at a row in the matrix. (Lengyel, col. 12, lines 7-11).

Furthermore, the reference discloses quantizing the transformation parameters and 3D position values in the base mesh. The subtractor module computes the difference between the de-quantized and transformed base mesh vertices and the vertices in the row of the vertex position matrix V for the current time sample. (Lengyel, col. 10, lines 61-65).

However, base mesh calculation, geometric transforms, and quantizing, as described by Lengyel fail to disclose partitioning the matrix into a set of overlapping sub-blocks, as is claimed by Applicant. Accordingly, Lengyel fails to teach each and every element of the independent claims.

Claims 29-32

Independent claims 29-32 include claim limitations that are not disclosed or suggested by Lengyel. In particular, these independent claims include the claim limitation, or limitation similar thereto, of receiving families of sets comprising, a family of sets of scalar weights $\{\{\sigma_i(k), i=1,\cdots,n(k)\}, k=1,\cdots,V\}$, a family of sets of vectors $\{\{u_i(k), i=1,\cdots,n(k)\}, k=1,\cdots,V\}$, and a family of sets of vectors $\{\{v_i(k), i=1,\cdots,n(k)\}, k=1,\cdots,V\}$.

Lengyel does not disclose these limitations. Rather, the reference discloses the de-compressor reconstructs the matrix of vertex positions, one row at a time, for time samples in an animation sequence. The de-quantizers in the de-compressor de-quantize the residuals, the transformation parameters, and the 3D position data of the base mesh,

respectively. (Lengyel, col. 11, lines 14-18, and Figs.1-2). The compressor and de-compressor in the inverse transform coder operate on the same input data. (Lengyel, col. 13, lines 59-61). Thus, the reference fails to teach receiving families of sets, as is claimed by Applicant.

Accordingly, Lengyel does not anticipate independent claims 1, 10, 19, 24, and 29-32. The remaining claims depend from one of the foregoing independent claims and thus include the novel claim limitations discussed above. Therefore, Lengyel does not anticipate claims 1 - 32.

CONCLUSION

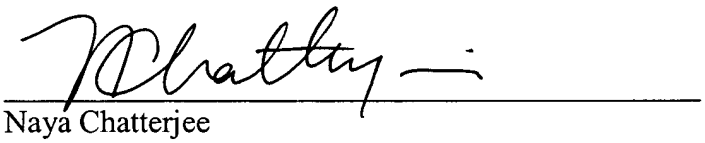
Applicants respectfully submit the present application is in condition for allowance. If the Examiner believes a telephone conference would expedite or assist in the allowance of the present application, the Examiner is invited to call the undersigned at (408) 720-8300.

Authorization is hereby given to charge our Deposit Account No. 02-2666 for any charges that may be due.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN

Date: 10/15/2004



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